This publication, including photographs, illustrations and software, is under the protection of international copyright laws, with all rights reserved. Neither this guide, nor any of the material contained herein, may be reproduced without the express written consent of the manufacturer.
The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Further, the manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademarks

IBM, VGA, and PS/2 are registered trademarks of International Business Machines.
AMD, Athlon 64 Sempron are registered trademarks of Advanced Micro Devices Inc.
Microsoft, MS-DOS and Windows XP/Vista/7 are registered trademarks of Microsoft Corporation.
Award is a registered trademark of Phonex Award.
Other names used in this publication may be trademarks and are acknowledged.

Static Electricity Precautions

1. Don't take this motherboard and components out of their original static-proof package until you are ready to install them.
2. While installing, please wear a grounded wrist strap if possible. If you don't have a wrist strap, discharge static electricity by touching the bare metal of the system chassis.
3. Carefully hold this motherboard by its edges. Do not touch those components unless it is absolutely necessary. Put this motherboard on the top of static-protection package with component side facing up while installing.

Pre-Installation Inspection

1. Inspect this motherboard whether there are any damages to components and connectors on the board.
2. If you suspect this motherboard has been damaged, do not connect power to the system. Contact your motherboard vendor about those damages.

Copyright © 2009
All Rights Reserved
A15G Series, V3.0
Nov. 2009

Table of Contents

Trademark ..... **i**

Chapter 1: Introduction **1**
Key Features *1*
Package Contents *4*

Chapter 2: Motherboard Installation **5**
Motherboard Components *6*
I/O Ports *7*
Installing the Processor *7*
Installing Memory Modules *8*
Jumper Settings *10*
Install the Motherboard *11*
Connecting Optional Devices *12*
Install Other Devices *14*
Expansion Slots *16*

Chapter 3: BIOS Setup Utility **18**
Introduction *18*
Running the Setup Utility ..... *..18*
Standard CMOS Setup Page *19*
Advanced SetupPage *21*
Advanced Chipset Setup Page *24*
Integrated Peripherals Page *25*
Power Management Setup Page *26*
PnP/PCI Setup Page *28*
PC Health Status Page *28*
Frequency/Voltage Control Page *30*
Load Default Settings *31*
Supervisor Password *31*
User Password *32*
Save & Exit setup *32*
Exit without saving *32*

Chapter 4: Software & Applications **33**
Introduction *33*
Installing Support Software *33*
Bundled Software Installation *35*

Chapter 5: Setting Up NVIDIA RAID Configuration **36**
Setting Up a Non-Bootable RAID Array *36*
Setting Up a Bootable RAID Array *38*

Chapter 6: Trouble Shooting Tips 45
Start up problems during assembly 45
Start up problems after prolong use 46
Maintenance and care tips 46

Notice:

1. Owing to Microsoft's certifying schedule is various to every supplier, we might have some drivers not certified yet by Microsoft. Therefore, it might happen under Windows XP that a dialogue box (shown as below) pops out warning you this software has not passed Windows Logo testing to verify its compatibility with Windows XP. Please rest assured that our RD department has already tested and verified these drivers. Just click the "Continue Anyway" button and go ahead the installation.

Hardware Installation
The software you are installing for this hardware:
HSP56 MicroModem
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Chapter 1 Introduction

This motherboard has a **socket AM2+/AM2** supporting the newest and advanced **AMD Phenom™ II/AMD Phenom™ /Athlon™ 64 X2 Dual-Core/Athlon™ 64/ Sempron™** CPUs with **2000 MT/s Hyper Transport™ (HT)** interface Speeds.

This motherboard is based on **NVIDIA® MCP61P/MCP61S** that supports the **Serial ATA** interface for high-performance and mainstream desktop PCs, and the built-in **USB 2.0** providing higher bandwidth, implementing **USB 2.0 EHCI** and **USB 1.1 OHCI**. It supports **High Definition Audio Codec** and provides one **IDE Ultra DMA 133**/100/66/33 channel. It has one **PCI Express x16** slot (MCP61S only supports PCI Express x8), one **PCI Express x1** slot and two 32-bit **PCI** slots. There is a full set of I/O ports including two PS/2 ports for mouse and keyboard, one parallel port, one serial port, VGA1, one LAN port, four back-panel USB2.0 ports, and audio jacks for microphone, line-in and 6/8-channel (optional) line-out. Onboard USB header(s) can provide extra ports by connecting the Extended USB Module to the motherboard.

This motherboard is a **Micro ATX size** motherboard and has power connectors for an ATX power supply.

Key Features

The key features of this motherboard include:

Socket-AM2+/AM2 Processor Support

- Supports socket AM2+/AM2 for **AMD Phenom™ II/AMD Phenom™/ Athlon™ 64 X2 Dual-Core/Athlon™ 64/Sempron™** processors
- Supports up to **2000 MT/s HyperTransport™** interface Speeds

Note: HyperTransport Technology is a point-to-point link between two devices, it enables integrated circuits to exchange information at much higher speeds than currently available interconnect technologies.

Chipset

The NVIDIA® **MCP61P/MCP61S** is a single-chip with proven reliability and performance.

- 1 GHz HyperTransport x16 up and down links to the AM2+/AM2 CPUs
- PCI Express 16 lane link interface for external graphics processors (MCP61S only supports PCI Express 8 lane link interface for other peripherals)
- PCI 2.3 interface at 33 MHz
- Integrated SATA 3.0 Gb/s Host Controller
- USB 2.0 ports supported
- Fast ATA-133 IDE controller

Memory Support

- Two 240-pin DIMM slots for DDR2 SDRAM memory modules
- Supports Dual Channel **DDR2 800**/667/533/400 memory bus
- Maximum installed memory is 16* GB
  (* Duo to the DRAM maximum size is 2 GB at present, the memory maximum size we have tested is 4 GB.)

Expansion Slots

- One PCI Express x16 slot (MCP61S only supports PCI Express x8)
- One PCI Express x1 slot
- Two 32-bit PCI slots

Onboard IDE channels

- One IDE Connector
- Supports PIO (Programmable Input/Output) and DMA (Direct Memory Access) modes
- Supports IDE Ultra DMA bus mastering with transfer rates of **133**/100/66/33 MB/sec

Serial ATA

- Four Serial ATA Connectors
- Compliant with the SATA2 with **3.0** Gb/s per direction per channel

Audio Codec (optional)

• 7.1+2 Channel High Definition Audio Codec • All DACs support 192K/96K/48K/44.1KHz DAC sample rate • Software selectable 2.5V/3.75V VREPOUT • Meets Microsoft WHQL/WLP 2.x audio requirements • Direct Sound 3D™ compatible
• 7.1 Channel High Definition Audio Codec • ADC support 148K/96K sample rate • High quality differential CD input • Power Support: Digital: 3.3V; Analog: 5.0V • Meets Microsoft WHQL/WLP 2.0 audio requirements • Direct Sound 3D™ compatible
• 5.1 Channel Hifh Definition Audio Codec • ADCs support 44.1/48k/96k sample rate • Meets Microsoft WHQL/WLP 3.0x audio requirements • Direct Sound 3D™ compatible
• 5.1 Channel Hifh Definition Audio Codec • ADCs support 44.1/48k/96k sample rate • Meets Microsoft WLP 3.08 Vista premium and mobile PCs audio requirements • Direct Sound 3D™ compatible

Onboard I/O Ports

- Two PS/2 ports for mouse and keyboard
- One parallel port
- One serial port
- One VGA port
- Four back-panel USB2.0 ports
- One LAN port
- Audio jacks for microphone, line-in and 6/8-channel (optional) line-out

Fast Ethernet LAN

- **10Base-T/100BASE-TX** IEEE 802.3u fast Ethernet transceiver
- Low-power mode
- MII and 7-wire serial interface

USB 2.0

- Compliant with Universal Serial Bus Specification Revision 2.0
- Compliant with Open Host Controller Interface Specification Revision 1.1

BIOS Firmware

This motherboard uses AMI BIOS that enables users to configure many system features including the following:

- Power management
- Wake-up alarms
- CPU parameters and memory timing
- CPU and memory timing

The firmware can also be used to set parameters for different processor clock speeds.

Dimensions

- Micro-ATX form factor of 244 x 214 mm

Note: Hardware specifications and software items are subject to change without notification.

Package Contents

Your motherboard package ships with the following items:

- ❑ The motherboard
- ❑ The User's Guide
- ❑ One diskette drive ribbon cable (optional)
- ❑ One IDE drive ribbon cable
- ❑ The Software support disk

Optional Accessories

You can purchase the following optional accessories for this motherboard.

- ❑ The Extended USB module
- ❑ The Serial ATA cable
- ❑ The Serial ATA power cable

Note: You can purchase your own optional accessories from the third party, but please contact your local vendor on any issues of the specification and compatibility.

Chapter 2 Motherboard Installation

To install this motherboard in a system, please follow these instructions in this chapter:

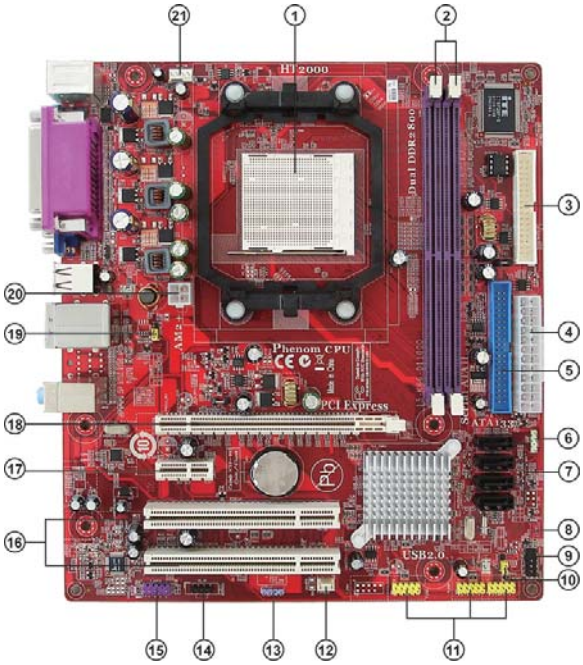
- Identify the motherboard components
- Install a CPU
- Install one or more system memory modules
- Make sure all jumpers and switches are set correctly
- Install this motherboard in a system chassis (case)
- Connect any extension brackets or cables to headers/connectors on the motherboard
- Install peripheral devices and make the appropriate connections to headers/connectors on the motherboard

Note:

1 Before installing this motherboard, make sure jumper CLR_CMOS is under Normal setting. See this chapter for information about locating CLR_CMOS and the setting options.

2 Never connect power to the system during installation; otherwise, it may damage the motherboard.

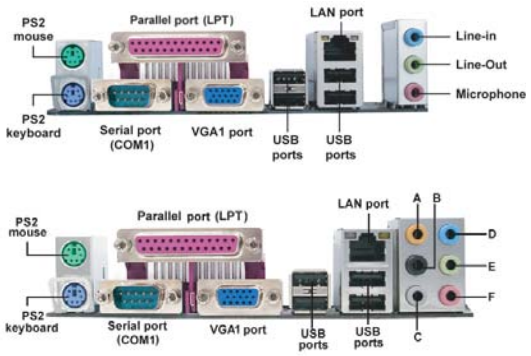
Motherboard Components



ITEM	LABEL	COMPONENTS
1	CPU Socket	Socket AM2+/AM2 for AMD Phenom™ II/AMD Phenom™/AMD X2 Dual-Core/Athlon™ 64/ Sempron™ processors
2	DIMM1~2	240-pin DDR2 SDRAM slots
3	FDD	Floppy disk drive connector
4	PWR1	Standard 24-pin ATX power connector
5	IDE1	Primary IDE connector
6	SPK1	Speaker header
7	SATA1~4	Serial ATA connectors
8	CLR_CMOS	Clear CMOS jumper
9	PANEL1	Front panel switch/LED header
10	USBPWR_F	Front Panel USB Power Select Jumper
11	F_USB1~3	Front Panel USB headers
12	SYS_FAN	System cooling fan connector
13	SPDIFO1	SPDIF out header
14	CD_IN	Analog audio input header
15	F_AUDIO	Front panel audio header
16	PCI1~2	32-bit add-on card slots
17	PCIEX1	PCI Express x1 slot
18	PCIEX16	PCI Express x16 slot for graphics interface
19	USBPWR_R	Rear Panel USB PS/2 Power Select Jumper
20	PWR2	4-pin +12V power connector

I/O Ports (optional)

The illustration below shows a side view of the built-in I/O ports on the motherboard.



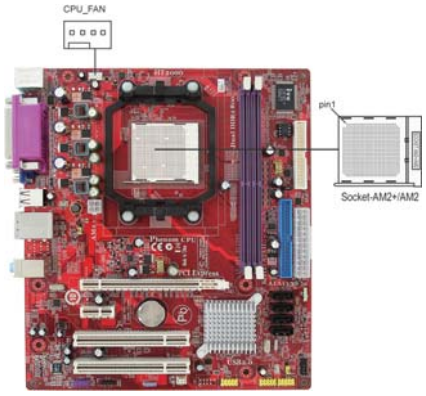
PS/2 Mouse	Use the upper PS/2 port to connect a PS/2 pointing device.
PS/2 Keyboard	Use the lower PS/2 port to connect a PS/2 keyboard.
Parallel Port (LPT)	Use the Parallel port to connect printers or other parallel communications devices.
Serial Port (COM1)	Use the COM port to connect serial devices such as mice or fax/modems.
VGA1 Port	Use the VGA1 port to connect the VGA devices.
LAN Port	Connect an RJ-45 jack to the LAN port to connect your computer to the Network.
USB Ports	Use the USB ports to connect USB devices.
Audio Ports (optional)	Use these three audio jacks to connect audio devices. The first jack is for stereo Line-In signal, the second jack for stereo Line-Out signal, and the third jack for Microphone.
	Use these audio jacks to connect audio devices. The A port is for stereo Line-In signal, while the C port is for microphone in signal. The motherboard supports 8-channel audio devices that correspond to A, B, D and E port respectively. In addition, all of the three ports, A, B and D provide users with both right & left channels individually.

Installing the Processor

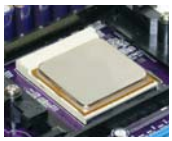
This motherboard has an AM2+/AM2 processor socket. When choosing a processor, consider the performance requirements of the system. Performance is based on the processor design, the clock speed and system bus frequency of the processor, and the quantity of internal cache memory and external cache memory.

CPU Installation Procedure

Follow these instructions to install the CPU:



1 Unhook the locking lever of the CPU socket. Pull the locking lever away from the socket and raising it to the upright position.
2 Match the pin1 corner marked as the beveled edge on the CPU with the pin1 corner on the socket. Insert the CPU into the socket. Do not use force.
3 Push the locking lever down and hook it under the latch on the edge of socket.
4 Apply thermal grease to the top of the CPU.
5 Install the cooling fan/heatsink unit onto the CPU, and secure them all onto the socket base.
6 Plug the CPU fan power cable into the CPU fan connector (CPU_FAN) on the motherboard.

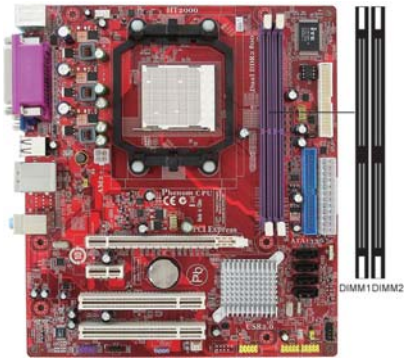


Note: To achieve better airflow rates and heat dissipation, we suggest that you use a high quality fan with 4800 rpm at least. CPU fan and heatsink installation procedures may vary with the type of CPU fan/heatsink supplied. The form and size of fan/heatsink may also vary.

Installing Memory Modules

This motherboard accommodates two 240-pin DIMM sockets (Dual Channel Memory Module) for unbuffered **DDR2 800**/667/533/400 memory modules (Double Data Rate SDRAM), and maximum 16* GB installed memory.

Over its predecessor, DDR2-SDRAM offers greater bandwidth and density in a smaller package along with a reduction in power consumption. In addition, DDR2-SDRAM offers new features and functions that enable a higher clock rate and data rate operations of 800/667/533/400 MHz. DDR2 transfers 64 bits of data twice every clock cycle.



Memory Module Installation Procedure

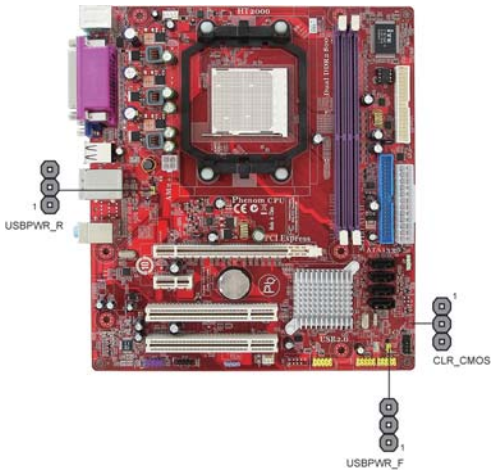
These modules can be installed with up to 16* GB system memory. Refer to the following to install the memory module.

1. Push down the latches on both sides of the DIMM socket.
2. Align the memory module with the socket. There is a notch on the DIMM socket that you can install the DIMM module in the correct direction. Match the cutout on the DIMM module with the notch on the DIMM socket.
3. Install the DIMM module into the socket and press it firmly down until it is seated correctly. The socket latches are levered upwards and latch on to the edges of the DIMM.
4. Install any remaining DIMM modules.

Note for dual-channel DDR2:
1. You CAN NOT use only one DIMM2 for it might cause the system shutdown.
2. You need to use DIMM1 and DIMM2 with the same size of memory modules.

Jumper Settings

Connecting two pins with a jumper cap is SHORT; removing a jumper cap from these pins, OPEN.



CLR_CMOS: Clear CMOS Jumper

Use this jumper to clear the contents of the CMOS memory. You may need to clear the CMOS memory if the settings in the Setup Utility are incorrect and prevent your motherboard from operating. To clear the CMOS memory, disconnect all the power cables from the motherboard and then move the jumper cap into the CLEAR setting for a few seconds.

Function	Jumper
NORMAL	Short Pins 1-2
CLEAR CMOS	Short Pins 2-3

Note: To avoid the system unstability after clearing CMOS, we recommend users to enter the main BIOS setting page to "Load Optimal De-faults" and then "Save Changes and Exit".

USBPWR_F: FRONT PANEL USB POWER SELECT Jumper

Use this jumper to set the Front Panel USB Power function.

Function	Jumper Setting
VCC5	Short Pins 1-2
VCC5_DUAL	Short Pins 2-3

USBPWR_R: REAR USB PS/2 POWER SELECT Jumper

Use this jumper to set the Rear USB PS/2 Power function.

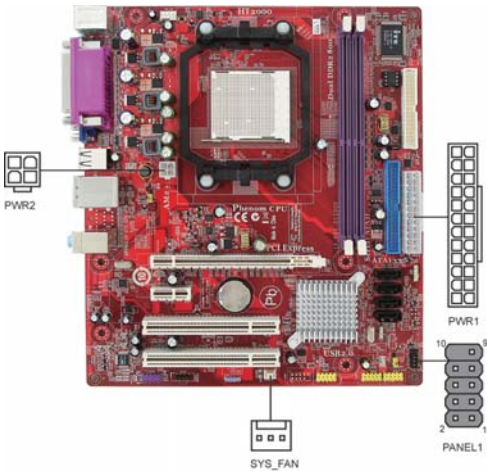
Function	Jumper Setting
VCC5	Short Pins 1-2
VCC5_DUAL	Short Pins 2-3

Note:1. Make sure the power supply provides enough VCC5_DUAL voltage before selecting the VCC5_DUAL function.
2. It is required that users place the USBPWR_F & USBPWR_R cap onto 2-3 pin rather than 1-2 pin as default if you want to wake up the computer by USB/PS2 KB/Mouse.

Install The Motherboard

Install the motherboard in a system chassis (case). The board is an micro-ATX size motherboard. You can install this motherboard in an ATX case. Make sure your case has an I/O cover plate matching the ports on this motherboard.

Install the motherboard in a case. Follow the case manufacturer's instructions to use the hardware and internal mounting points on the chassis.



Connect the power connector from the power supply to the **PWR1** connector on the motherboard. **PWR2** is a +12V connecotr for CPU Vcore power.

If there is a cooling fan installed in the system chassis, connect the system cooling fan cable to the **SYS_FAN** fan power connector on the motherboard.

Connect the case switches and indicator LEDs to the **PANEL1** header.

Here is a list of the PANEL1 pin assignments.

Pin	Signal	Pin	Signal
1	HD_LED_P(+)	2	FP PWR/SLP(+)
3	HD_LED_N(-)	4	FP PWR/SLP(-)
5	RESET_SW_N(-)	6	POWER_SW_P(+)
7	RESET_SW_P(+)	8	POWER_SW_N(-)
9	RSVD	10	KEY

Connecting Optional Devices

Refer to the following for information on connecting the motherboard's optional devices:

SPK1: Speaker Header

Connect the cable from the PC speaker to the SPK1 header on the motherboard.

Pin	Signal
1	VCC
2	Key
3	GND
4	Signal

F_AUDIO: Front Panel Audio Header (optional)

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal	Pin	Signal
1	PORT 1L	2	GND
3	PORT 1R	4	PRESENCE#
5	PORT 2R	6	Sense1_return
7	SENCE_SEND	8	KEY
9	PORT 2L	10	Sense2_return

F_USB1~3: Front Panel USB Headers

The motherboard has USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB headers F_USB1~3 to connect the front-mounted ports to the motherboard.

Here is a list of USB pin assignments.

Pin	Signal	Pin	Signal
1	USBPWR0	2	USBPWR0
3	USB_FP_P0(-)	4	USB_FP_P1(-)
5	USB_FP_P0(+)	6	USB_FP_P1(+)
7	GND	8	GND
9	KEY	10	USB_FP_OC0

1. Locate the F_USB1~3 header on the motherboard.
2. Plug the bracket cable onto the F_USB1~3 header.
3. Remove a slot cover from one of the expansion slots on the system chassis. Install an extension bracket in the opening. Secure the extension bracket to the chassis with a screw.

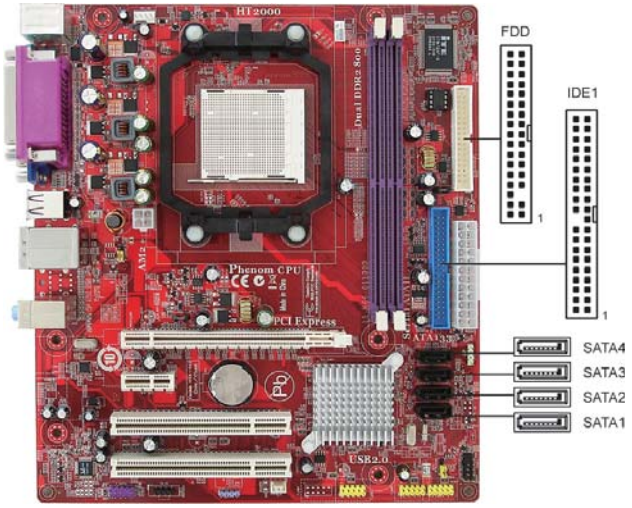
SPDIFO1: S/PIF Out Header

S/PDIF (Sony/Plilips Digital Interface) is a standard audio transfer file format and allows the transfer of digatal audio signals from one device to another without having to be converted first to an analog format. Via a specific audio cable, you can connect the SPDIFO1 header (S/PDIF output) on the motherboard to the S/PDIF digital input on the external speakers or AC Decode devices.

Pin	Signal
1	SPDIFOUT
2	5VA
3	Key
4	GND

Install Other Devices

Install and connect any other devices in the system following the steps below.



Floppy Disk Drive

The motherboard ships with a floppy disk drive cable that can support one or two drives. Drives can be 3.5" or 5.25" wide, with capacities of 360K, 720K, 1.2MB, 1.44MB, or 2.88MB.

Install your drives and connect power from the system power supply. Use the cable provided to connect the drives to the floppy disk drive connector **FDD**.

IDE Devices

IDE devices include hard disk drives, high-density diskette drives, and CD-ROM or DVD-ROM drives, among others.

The mainboard ships with an IDE cable that can support one or two IDE devices. If you connect two devices to a single cable, you must configure one of the drives as Master and one of the drives as Slave. The documentation of the IDE device will tell you how to configure the device as a Master or Slave device. The Master device connects to the end of the cable.

Install the device(s) and connect power from the system power supply. Use the cable provided to connect the device(s) to the Primary IDE channel connector **IDE1** on the motherboard.

Serial ATA Devices

The **Serial ATA (Advanced Technology Attachment)** is the standard interface for the IDE hard drives, which is designed to overcome the design limitations while enabling the storage interface to scale with the growing media rate demands of PC platforms. It provides you a faster transfer rate of **3.0 Gb/s**. If you have installed a Serial ATA hard drive, you can connect the Serial ATA cables to the Serial ATA hard drive or the connector on the motherboard.

On the motherboard, locate the Serial ATA connectors **SATA1-4**, which support new Serial ATA devices for the highest data transfer rates, simpler disk drive cabling and easier PC assembly.

It eliminates limitations of the current Parallel ATA interface, but maintains register compatibility and software compatibility with Parallel ATA.

Analog Audio Input Header

If you have installed a CD-ROM drive or DVD-ROM drive, you can connect the drive audio cable to the onboard sound system.

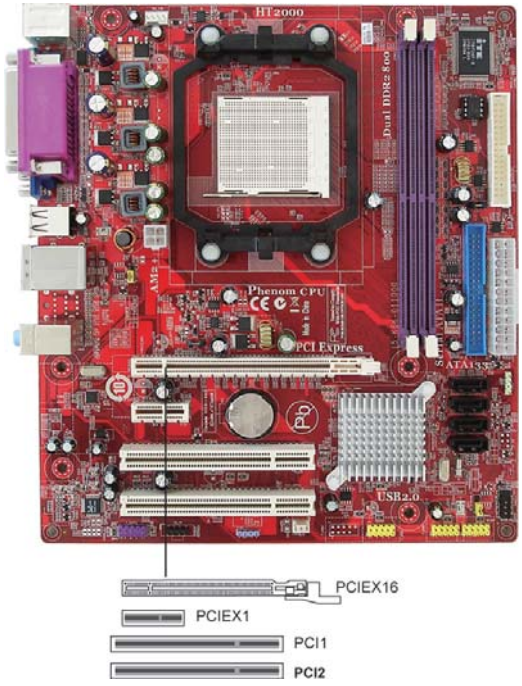
When you first start up your system, the BIOS should automatically detect your CD-ROM/DVD drive. If it doesn't, enter the Setup Utility and configure the CD-ROM/DVD drive that you have installed. On the motherboard, locate the 4-pin header **CD_IN**.

Here is a list of CD_IN pin assignments.

Pin	Signal
1	CD_L
2	GND
3	GND
4	CD_R

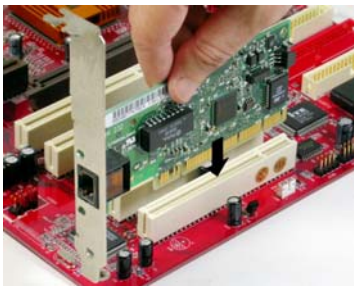
Expansion Slots

This motherboard has one PCI Ex16 slot (MCP61S only supports PCI Express x8), one PCI Ex1 slot and two 32-bit PCI slots.



Follow the steps below to install an PCI Express x16/PCI Express x1/PCI expansion card.

1. Locate the PCI Express x16, PCI Express x1 and PCI slots on the mainboard.
2. Remove the blanking plate of the slot from the system chassis.
3. Install the edge connector of the expansion card into the slot. Ensure the edge connector is correctly seated in the slot.
4. Secure the metal bracket of the card to the system chassis with a screw.



PCI Express x16 slot

The one PCI Express x16 slot is fully compliant to the PCI Express Base Specification revision 1.1 as well.

PCI Express x1 Slot

The one PCI Express x1 slot is fully compliant to the PCI Express Base Specification revision 1.1 as well.

PCI Slots

You can install the 32-bit PCI interface expansion cards in the slots.

Chapter 3 BIOS Setup Utility

Introduction

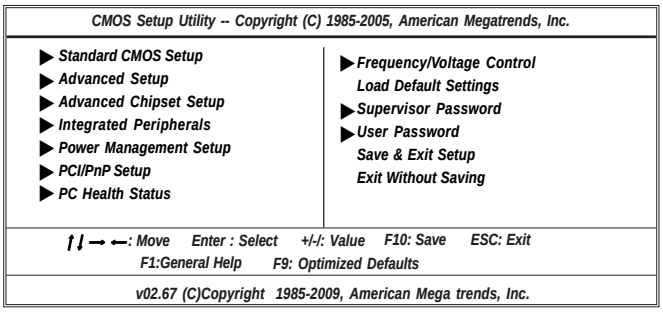
The BIOS Setup Utility records settings and information of your computer, such as date and time, the type of hardware installed, and various configuration settings. Your computer applies the information to initialize all the components when booting up and basic functions of coordination between system components.

If the Setup Utility configuration is incorrect, it may cause the system to malfunction. It can even stop your computer booting properly. If it happens, you can use the clear CMOS jumper to clear the CMOS memory which has stored the configuration information; or you can hold down the **Page Up** key while rebooting your computer. Holding down the **Page Up** key also clears the setup information.

You can run the setup utility and manually change the configuration. You might need to do this to configure some hardware installed in or connected to the motherboard, such as the CPU, system memory, disk drives, etc.

Running the Setup Utility

Every time you start your computer, a message appears on the screen before the operating system loading that prompts you to "*Hit <DEL> if you want to run SETUP*" . Whenever you see this message, press the **Delete** key, and the Main menu page of the Setup Utility appears on your monitor.


CMOS Setup Utility -- Copyright (C) 1985-2005, American Megatrends, Inc.
▶ Standard CMOS Setup
▶ Advanced Setup
▶ Advanced Chipset Setup
▶ Integrated Peripherals
▶ Power Management Setup
▶ PCI/PnP Setup
▶ PC Health Status
▶ Frequency/Voltage Control
Load Default Settings
▶ Supervisor Password
▶ User Password
Save & Exit Setup
Exit Without Saving
↑↓→←: Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1:General Help F9: Optimized Defaults
v02.67 (C)Copyright 1985-2009, American Mega trends, Inc.

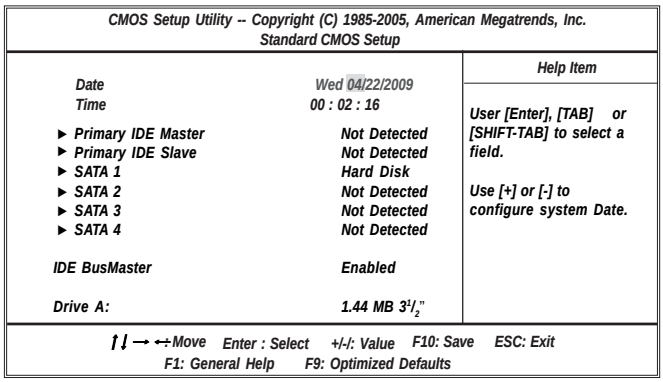
You can use cursor arrow keys to highlight anyone of options on the main menu page. Press **Enter** to select the highlighted option. Press the **Escape** key to leave the setup utility. Press +/-/ to modify the selected field's values.

Some options on the main menu page lead to tables of items with installed values that you can use cursor arrow keys to highlight one item, and press **PgUp** and **PgDn** keys to cycle through alternative values of that item. The other options on the main menu page lead to dialog boxes requiring your answer OK or Cancel by selecting the **[OK]** or **[Cancel]** key.

If you have already changed the setup utility, press **F10** to save those changes and exit the utility. Press **F1** to display a screen describing all key functions. Press **F9** to install the setup utility with a set of default values.

Standard CMOS Setup Page

This page displays a table of items defining basic information about your system.

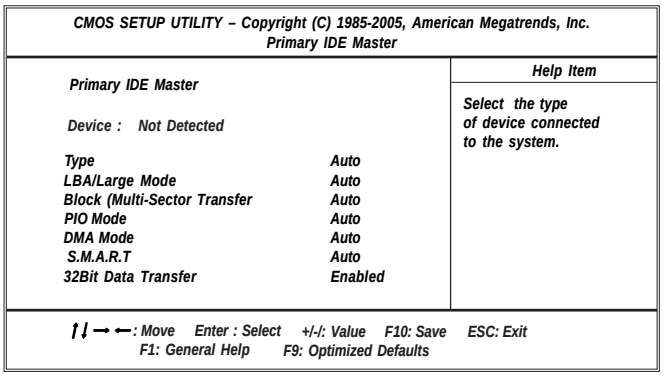


Date & Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

▸ Primary IDE Master/Slave, SATA 1~4

Your computer has one IDE channel which can be installed with one or two devices (Master and Slave). In addition, this motherboard supports four SATA channels and each channel allows one SATA device to be installed. Use these items to configure each device on the IDE channel.


CMOS SETUP UTILITY – Copyright (C) 1985-2005, American Megatrends, Inc.
Primary IDE Master
Primary IDE Master
Device : Not Detected
Type Auto
LBA/Large Mode Auto
Block (Multi-Sector Transfer Auto
PIO Mode Auto
DMA Mode Auto
S.M.A.R.T Auto
32Bit Data Transfer Enabled
Help Item
Select the type of device connected to the system.
↑↓→←: Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1: General Help F9: Optimized Defaults

Type (Auto)

Use this item to configure the type of the IDE device that you specify. If the feature is enabled, it will enhance hard disk performance by reading or writing more data during each transfer.

LBA/Large Mode (Auto)

Use this item to set the LAB/Large mode to enhance hard disk performance by optimizing the area the hard disk is visited each time.

Block (Multi-Sector Transfer) (Auto)

If the feature is enabled, it will enhance hard disk performance by reading or writing more data during each transfer.

PIO Mode (Auto)

Use this item to set the PIO mode to enhance hard disk performance by optimizing the hard disk timing.

DMA Mode (Auto)

DMA capability allows user to improve the transfer-speed and data-integrity for compatible IDE devices.

S.M.A.R.T. (Auto)

The S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance. S.M.A.R.T. software resides on both the disk drive and the host computer.

32Bit Data Transfer (Enabled)

Use this item to enable or disable the 32Bit Data Transfer.

Press <Esc> to return to the Standard CMOS Features page.

IDE BusMaster (Enabled)

This item enables or disables the DMA under DOS mode. We recommend you to leave this item at the default value.

Drive A (1.44 MB 3$^{1}/_{2}$")

This item defines the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Press <Esc> to return to the main menu setting page.

Advanced Setup Page

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.

CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc. Advanced Setup		
HT Frequency	Auto	Help Item
AMD C&Q	Enabled	SouthBrigde to K8(CPU)
Quick Power on Self Test	Enabled	frequency selection
Boot Up Numlock Status	On	by CPU capability
APIC Mode	Enabled	
1st Boot Device	Hard Drive	
2nd Boot Device	CD/DVD	
3rd Boot Device	1st FLOPPY DRIVE	
▶ Hard Disk Drives	Press Enter	
▶ Removable Drives	Press Enter	
Boot Other Device	Yes	
↑↓→←:Move +/-/: Value F10: Save ESC: Exit F1:General Help F9: Optimized Defaults		

HT Frequency (Auto)

This item enables users to manually set up the HyperTransport frequency. If Manual, the HT Frequency Value will display, and the options are 200 MHz, 400 MHz, 600 MHz, 800 MHz and 1000 MHz.

AMD C&Q (Enabled)

This item helps the system to lower the frequency when CPU idles. When the frequency decreases, the temperature will drop automatically as well.

Quick Power on Self Test (Enabled)

Enable this item to shorten the power on testing (POST) and have your system start up faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

Boot Up Numlock Status (On)

This item defines if the keyboard Num Lock key is active when your system is started.

APIC Mode (Enabled)

This item allows you to enable or disable the APCI (Advanced Programmable Interrupt Controller) mode. APIC provides symmetric multi-processing (SMP) for systems, allowing support for up to 60 processors.

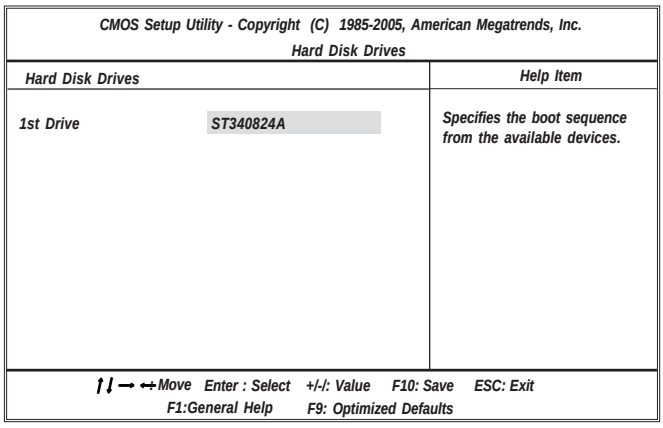
1st/2nd/3rd Boot Device (Hard Drive/CD/DVD/1st FLOPPY DRIVE)

Use this item to determine the device order the computer used to look for an operating system to load at start-up time. The devices showed here will be different depending on the exact devices installed on your motherboard.

Press <Esc> to return to Advanced BIOS Features page.

▸Hard Disk Drives (Press Enter)

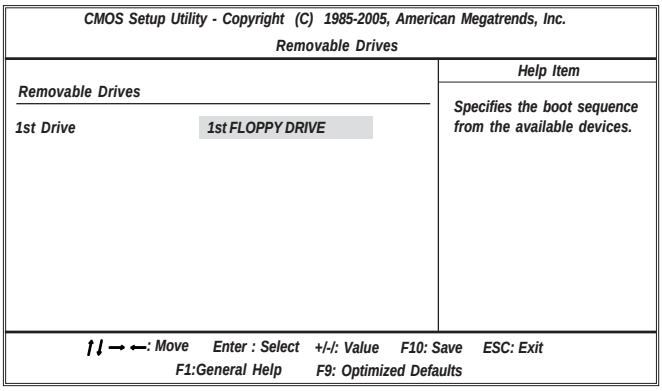
Scroll to this item and press <Enter> to view the following screen:


CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
Hard Disk Drives
Hard Disk Drives
Help Item
1st Drive
ST340824A
Specifies the boot sequence from the available devices.
↑↓→←:Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1:General Help F9: Optimized Defaults

Press <Esc> to return to the Advanced setup page.

▸Removable Drives (Press Enter)

Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to the Advanced setup page.

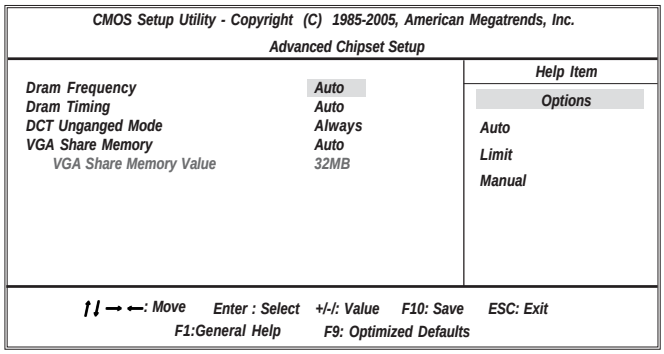
Boot Other Device (Yes)

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second, and Third boot devices.

Press <Esc> to return to the main menu setting page.

Advanced Chipset Setup Page

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



Dram Frequency (Auto)
This item enables users to adjust the DRAM frequency. The default setting is auto and we recommend users leave the setting unchanged. Modify it at will may cause the system to be unstable.

DRAM Timing (Auto)
This item allows you to enable or disable the DRAM timing defined by the Serial Presence Detect electrical. Users please note that if setting this item to auto, the following two items are not available.

DCT Unganged Mode (Always)
This item is used to select the DCT mode (DRAM Controller mode).

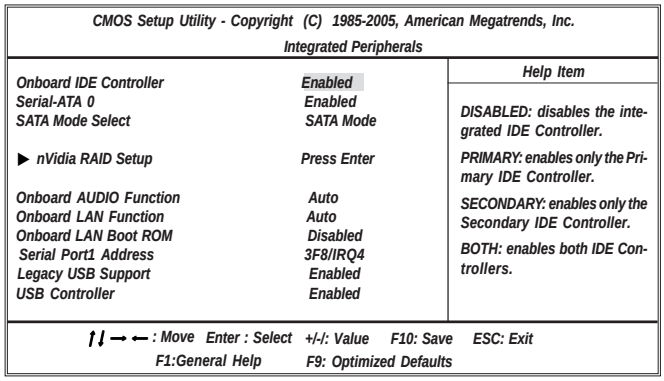
VGA Share Memory (Auto)
This item lets you allocate a portion of the main memory for the onboard VGA display application.

VGA Share Memory Value (32MB)
This item displays the VGA Share Memory Value.

Press <Esc> to return to the main menu setting page.

Integrated Peripherals Page

This page sets up some parameters for peripheral devices connected to the system.



OnBoard IDE Controller (Enabled)

Use this item to enable or disable the onboard IDE interface.

Serial-ATA 0 (Enabled)

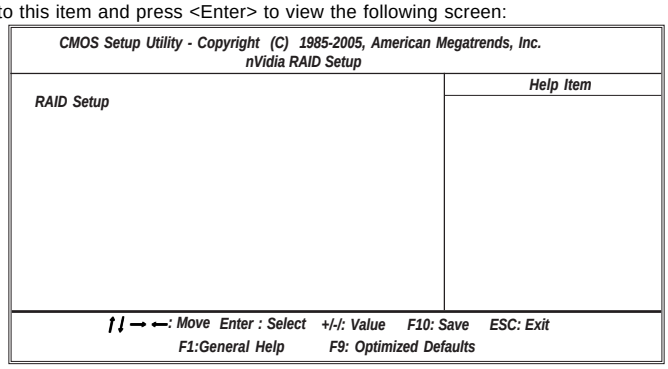
This item allows you to enable or disable the onboard SATA controller.

SATA Mode select (SATA Mode)

Use this item to select the mode of the Serial ATA.

▶ nVidia RAID Setup (Press Enter)

Scroll to this item and press <Enter> to view the following screen:


CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
nVidia RAID Setup
Help Item
RAID Setup
: Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1:General Help F9: Optimized Defaults

Onboard AUDIO Function (Auto)
Use this item to enable or disable the onboard audio device.

OnBoard LAN Function (Auto)

Use this item to enable or disable the onboard LAN function.

OnBoard LAN Boot ROM (Disabled)

Use this item to enable or disable the booting from the onboard LAN or a network add-in card with a remote boot ROM installed.

Serial Port1 Address (3F8/IRQ4)

Use this item to enable or disable the onboard COM1 serial port, and to assign a port address.

Legacy USB Support (Enabled)

Use this item to enable or disable support for legacy USB devices. Setting to Auto allows the system to detect the presence of USB device at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.

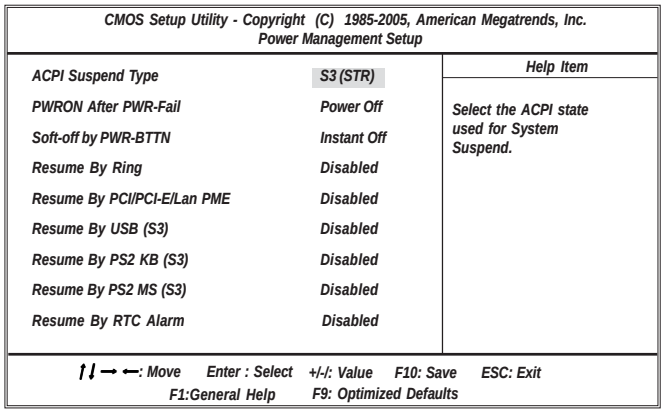
USB Controller (Enabled)

This item enables the USB controller. Leave this at the default "Enabled" if you want to connect USB devices to your computer.

Press <Esc> to return to the main menu setting page.

Power Management Setup Page

This page sets up some parameters for system power management operation.



ACPI Suspend Type (S3(STR))

Use this item to define how your system suspends. In the default, S3, the suspend mode is a suspend to RAM, i.e, the system shuts down with the exception of a refresh current to the system memory.

PWRON After PWR-Fail (Power Off)

This item enables your computer to automatically restart or return to its operating status.

Soft-Off By PWR-BTTN (Instant Off)

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec, then you have to hold the power button down for four seconds to cause a software power down.

Resume By Ring (Disabled)

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

Resume by PCI/PCI-E/Lan PME (Disabled)

These items specify whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or component is detected.

Resume By USB (S3) (Disabled)

This item allows you to enable/disable the USB device wakeup function from S3 mode.

Resume By PS2 KB (S3) (Disabled)

This item enable or disable you to allow keyboard activity to awaken the system from power saving mode.

Resume By PS2 MS (S3) (Disabled)

This item enable or disable you to allow mouse activity to awaken the system from power saving mode.

Resume By RTC Alarm (Disabled)

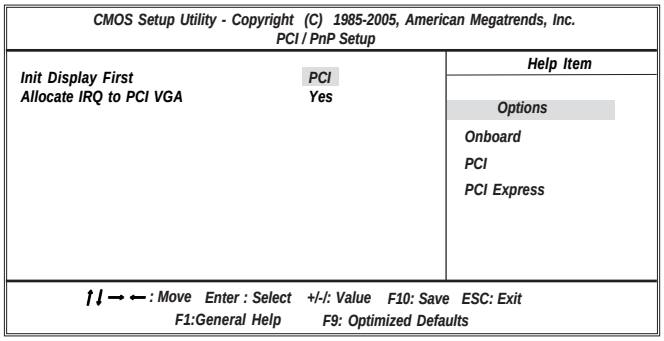
The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

Press <Esc> to return to the main menu setting page.

PCI/PnP Setup Page

Scroll to this item and press <Enter> to view the following screen:

This page sets up some parameters for devices installed on the PCI bus and those utilizing the system plug and play capability.



Init Display First (PCI)

Use this item to select which graphics controller to use as the primary boot devices.

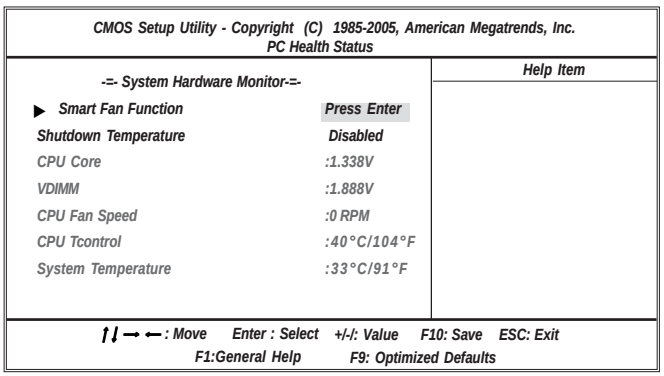
Allocate IRQ to PCI VGA (Yes)

If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system. You set this value to No to free up an IRQ.

Press <Esc> to return to the main menu setting page.

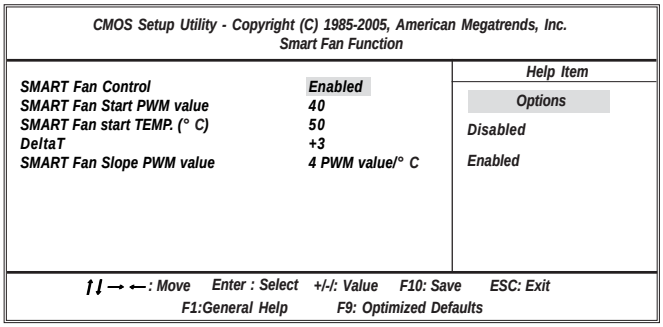
PC Health Status Page

On motherboards support hardware monitoring, this item lets you monitor the parameters for critical voltages, temperatures and fan speeds.



▸ Smart Fan Function

Scroll to this item and press <Enter> to view the following screen:



SMART Fan Control (Enabled)

This item allows you to enable or disable the control of the CPU fan speed by changing the fan voltage.

SMART Fan start PWM value (40)

This item is used to set the start PWM value of the smart fan.

SMART Fan start TEMP. (50)

This item is used to set the start temperature of the smart fan.

DeltaT (+3)

This item specifies the range that controls CPU temperature and keeps it from going so high or so low when smart fan works.

Smart FAN Slope PWM value (4 PWM value)

This item is used to set the Slope Select PWM of the smart fan.

Press <Esc> to return to the PC Health Status page.

Shutdown Temperature (Disabled)

This item nables you to set the maximum temperature the system can reach before powering down.

System Component Characteristics

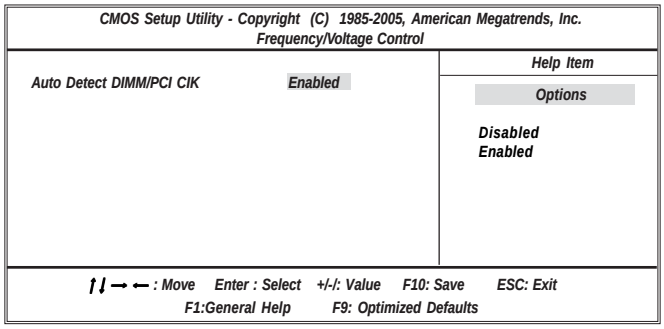
These items display the monitoring of the overall inboard hardware health events, such as System & CPU temperature, CPU & DIMM voltage, CPU & system fan speed,...etc.

- CPU Core
- VDIMM
- CPU Tcontrol
- CPU Fan Speed
- System Temperature

Press <Esc> to return to the main menu setting page.

Frequency/Voltage Control Page

This page enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.



Auto Detect DIMM/PCI Clk (Enabled)

When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.

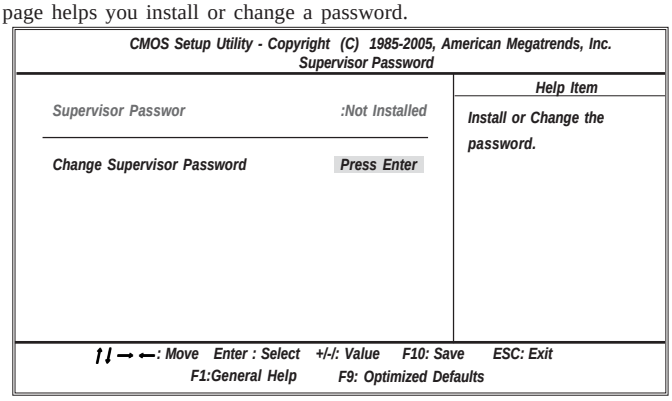
Press <Esc> to return to the main menu setting page.

Load Default Settings

This option opens a dialog box to ask if you are sure to install optimized defaults or not. You select [OK], and then <Enter>, the Setup Utility loads all default values; or select [Cancel], and then <Enter>, the Setup Utility does not load default values.

Supervisor Password

This page helps you install or change a password.


CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
Supervisor Password
Help Item
Supervisor Passwor :Not Installed
Install or Change the password.
Change Supervisor Password Press Enter
↑↓→←: Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1:General Help F9: Optimized Defaults

Supervisor Password (Not Installed)

This item indicates whether a supervisor password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

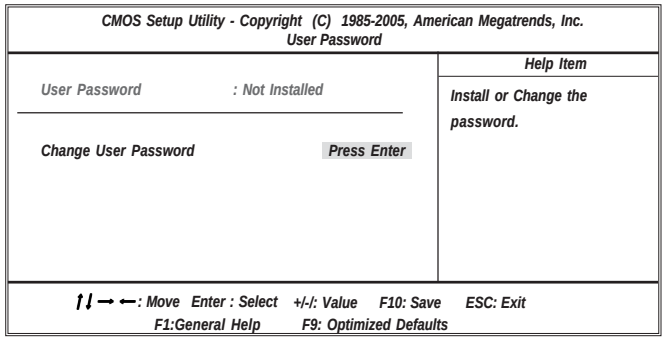
Change Supervisor Password (Press Enter)

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Press <Esc> to return to the main menu setting page.

User Password

This page helps you install or change a password.


CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
User Password
Help Item
User Password : Not Installed
Install or Change the password.
Change User Password
Press Enter
↑↓→←: Move Enter : Select +/-/: Value F10: Save ESC: Exit
F1:General Help F9: Optimized Defaults

User Password (Not Installed)

This item indicates whether a user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

Change User Password (Press Enter)

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Press <Esc> to return to the main menu setting page.

Save & Exit Setup

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, select [OK] to save and exit, or select [Cancel] to return to the main menu.

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, select [OK] to discard changes and exit, or select [Cancel] to return to the main menu.

Note: If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.

Chapter 4 Software & Applications

Introduction

This chapter describes the contents of the support DVD-ROM/CD-ROM that comes with the motherboard package.

The support DVD-ROM/CD-ROM contains all useful software, necessary drivers and utility programs to properly run our products. More program information is available in a README file, located in the same directory as the software.

To run the support disk, simply insert the disk into your DVD-ROM/CD-ROM drive. An Auto Setup screen automatically pops out, and then you can go on the auto-installing or manual installation depending on your operating system.

If your operating system is Windows XP/Vista/7, it will automatically install all the drivers and utilities for your motherboard.

Installing Support Software

1 Insert the support DVD-ROM/CD-ROM disc in the DVD-ROM/CD-ROM drive.

2 When you insert the DVD-ROM/CD-ROM disc in the system DVD-ROM/CD-ROM drive, the disk automatically displays an Auto Setup screen.

3 The screen displays three buttons of **Setup**, **Browse CD** and **Exit** on the right side, and three others **Setup**, **Application** and **ReadMe** at the bottom. Please see the following illustration.

The **Setup** button runs the software auto-installing program as explained in next section.

The **Browse CD** button is a standard Windows command that you can check the contents of the disc with the Windows file browsing interface.

The **Exit** button closes the Auto Setup window. To run the program again, reinsert the DVD-ROM/CD-ROM disc in the drive; or click the DVD-ROM/CD-ROM driver from the Windows Explorer, and click the Setup icon.

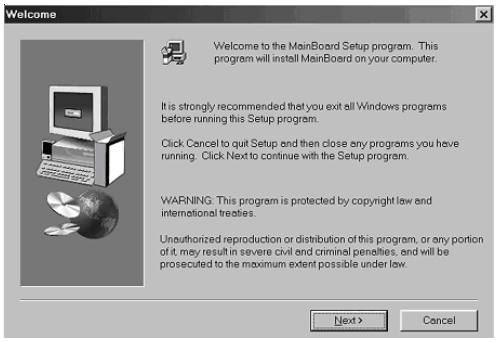
The **Application** button brings up a software menu. It shows the bundled software that this mainboard supports.

The **ReadMe** brings you to the Install Path where you can find out path names of software driver.

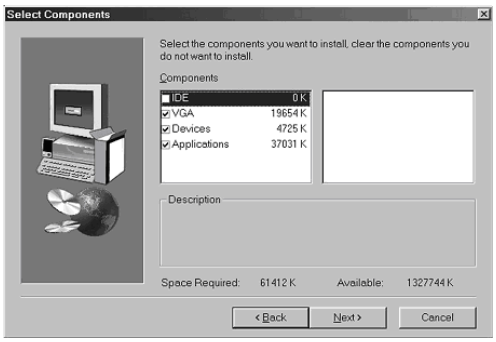
Auto-Installing under Windows XP/Vista/7

If you are under Windows XP/Vista/7, please click the **Setup** button to run the software auto-installing program while the Auto Setup screen pops out after inserting the support DVD-ROM/CD-ROM:

1 The installation program loads and displays the following screen. Click the **Next** button.


Welcome
Welcome to the MainBoard Setup program. This program will install MainBoard on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

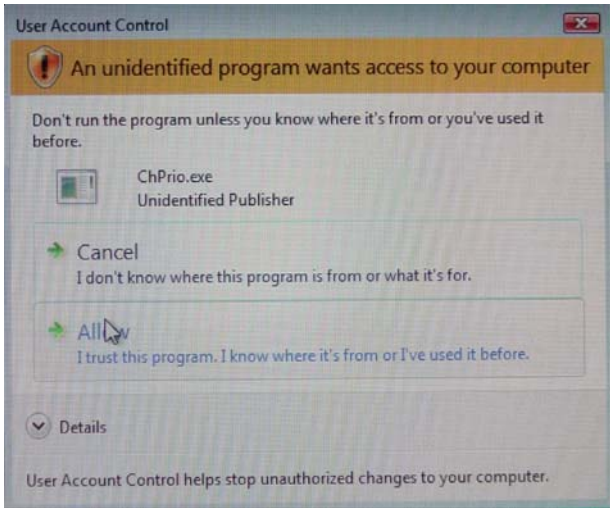
2 Select the items that you want to setup by clicking on it (the default options are recommended). Click the **Next** button to proceed.



3 The support software will automatically install.

Once any of the installation procedures start, software is automatically installed in sequence. You need to follow the onscreen instructions, confirm commands and allow the computer to restart as few times as needed to complete installing whatever software you selected. When the process is finished, all the support software will be installed and start working.

Windows Vista/7 will appear below UAC (User Account Control) message after the system restart. You must select "Allow" to install the next driver. Continue this process to complete the drivers installation.


User Account Control
An unidentified program wants access to your computer
Don't run the program unless you know where it's from or you've used it before.
ChPrio.exe
Unidentified Publisher
Cancel
I don't know where this program is from or what it's for.
Allow
I trust this program. I know where it's from or I've used it before.
Details
User Account Control helps stop unauthorized changes to your computer.

Bundled Software Installation

All bundled software available on the DVD-ROM/CD-ROM is for users' convenience. You can install bundled software as follows:

1 Click the **Application** button while the Auto Setup screen pops out after inserting the support DVD-ROM/CD-ROM.
2 A software menu appears. Click the software you want to install.
3 Follow onscreen instructions to install the software program step by step until finished.

Note: Please go to PCCHIPS Website to download AMD Cool'n'Quiet™ Technology.

Chapter 5 Setting Up NVIDIA RAID Configuration

There are two ways to setup NVIDIA RAID Configuration: one is to create a RAID 1 Array for backup or a RAID 0 Array for increased performance just by adding additional disk array without changing the original OS (Non-Bootable RAID Array); while the other is to configure the RAID Array disks when reinstalling the OS (Bootable RAID Array).

Setting Up a Non-Bootable RAID Array

RAID arrays can be created/deleted using both MediaShield RAID BIOS and the MediaShield RAID Manager from Windows. This section only covers basic BIOS setup required for non-bootable array. See the section "Setting Up a Bootable RAID Array" for instructions on configuring the RAID array in BIOS. See sections on using the MediaShield RAID Manager for details on configuring non-bootable RAID from Windows.

Setting Up the BIOS

1 Start your computer, then press Delete to enter the BIOS setup.

The BIOS CMOS Setup Utility window appears.

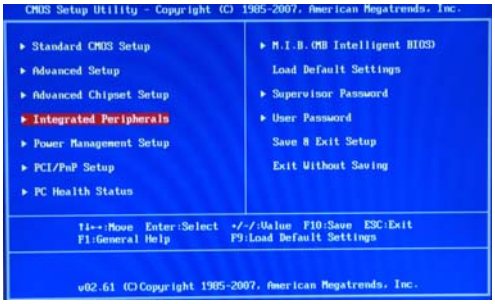


Figure 1.1 BIOS CMOS Setup Utility Main Window

2 Use the arrow keys to select Integrated Peripherals (see Figure 1.1), then press Enter.

The Integrated Peripherals window appears.

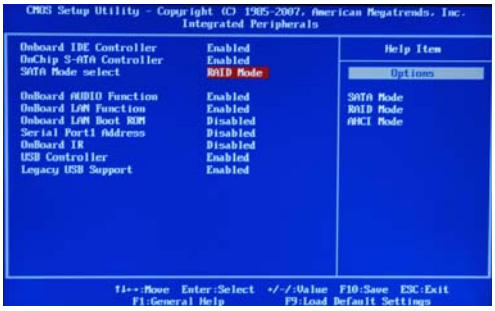


Figure 1.2 Integrated Peripherals Window

3 From the Integrated Peripherals Window, globally set SATA Mode select to RAID Mode (see Figure 1.2).

4 Press F10 to save the configuration and exit (F10 is the navigation key to save the current configuration and exit setup in BIOS setting).

The PC reboots.

Installing the NVIDIA RAID Software Under Windows

This section describes how to run the setup application and install the RAID software.

1 Start the nForce Setup program to open the NVIDIA Windows nForce Drivers page.

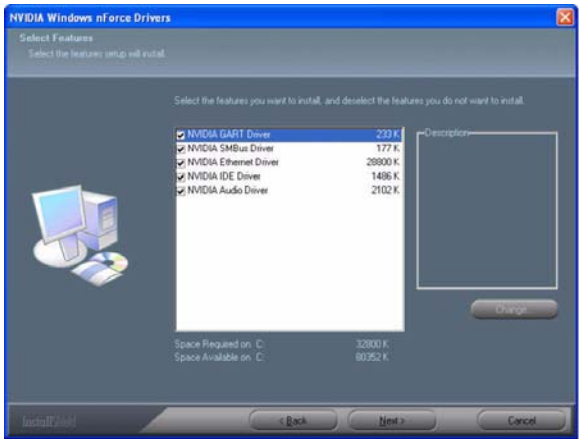

NVIDIA Windows nForce Drivers
Select Features
Select the features you want to install, and deselect the features you do not want to install.
NVIDIA GART Driver 233 K
NVIDIA SMBus Driver 177 K
NVIDIA Ethernet Driver 28800 K
NVIDIA IDE Driver 1486 K
NVIDIA Audio Driver 2102 K
Description
Change
Space Required on: C: 32800 K
Space Available on: C: 80352 K
InstallShield
< Back
Next >
Cancel

Figure 1.3 nForce Driver Installation Window

2 Select the modules that you want to install.
Make sure that the “NVIDIA IDE Driver” is selected.

3 You must install the NVIDIA IDE driver in order to enable NVIDIA RAID. If you do not install the NVIDIA IDE driver, NVIDIA RAID will not be enabled.

4 Click Next and then follow the instructions.After the installation is completed, be sure to reboot the PC.

5 After the reboot, initialize the newly created array.

Setting Up a Bootable RAID Array

This section explains how to configure a bootable NVIDIA RAID array.

Setting Up the BIOS

1 Start your computer, then press Delete to enter the BIOS setup.

The BIOS CMOS Setup Utility screen appears.

Figure 1.4 BIOS CMOS Setup Utility Main Screen

2 Use the arrow keys to select Integrated Peripherals (see Figure 1.4), then press Enter.

The Integrated Peripherals screen (or a screen similar to it) appears.

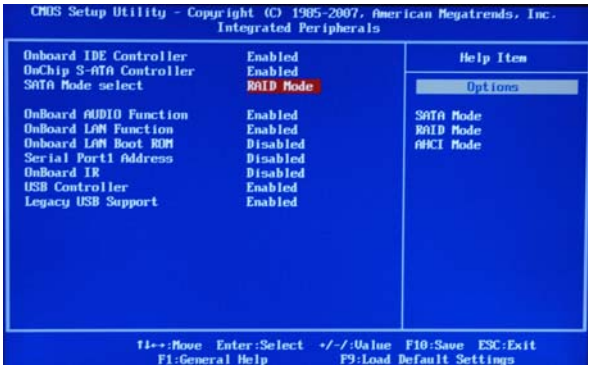


Figure 1.5 Integrated Peripherals Screen

3 From the Integrated Peripherals Window, globally set SATA Mode select to RAID Mode (see Figure 1.5).

4 Press F10 to save the configuration and exit.
The PC reboots.

5 Enter the RAID BIOS Setup by pressing F10 when prompted, and proceed to set up the NVIDIA RAID BIOS as described in the next section.

Configuring the NVIDIA RAID BIOS

The NVIDIA RAID BIOS set up lets you choose the RAID type and which hard drives you want to make part of the array.

Entering the RAID BIOS Setup:

1 Wait until you see the RAID software prompting you to press F10.

The RAID prompt appears as part of the system POST and boot process prior to loading of the OS. You have a few seconds to press F10 before the screen disappears (see Figure 1.6).

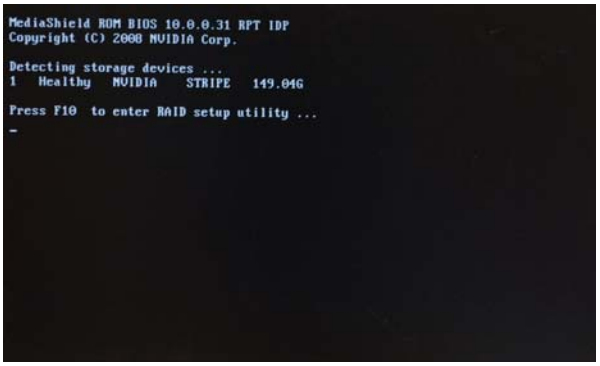

MediaShield ROM BIOS 10.0.0.31 RPT IDP
Copyright (C) 2008 NVIDIA Corp.
Detecting storage devices ...
1 Healthy NVIDIA STRIPE 149.04G
Press F10 to enter RAID setup utility ...

Figure 1.6

2 Press F10 to enter Define a New Array page.

The NVIDIA RAID Utility—Define a New Array screen appears (Figure 1.7).

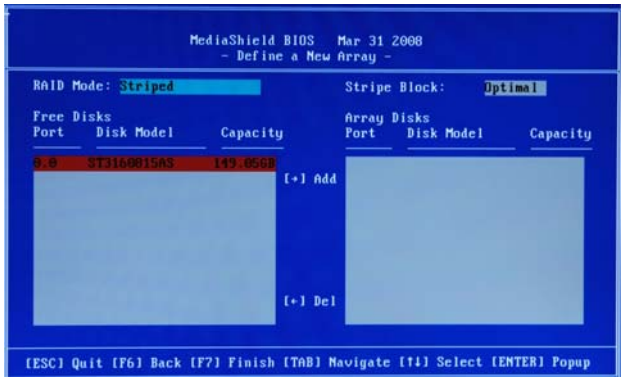

MediaShield BIOS Mar 31 2008
- Define a New Array -
RAID Mode: Striped
Stripe Block: Optimal
Free Disks
Port Disk Model Capacity
0.0 ST3160815AS 149.05GB
[+] Add
[+] Del
Array Disks
Port Disk Model Capacity
[ESC] Quit [F6] Back [F7] Finish [TAB] Navigate [↑↓] Select [ENTER] Popup

Figure 1.7 MediaShield BIOS

By default, RAID Mode is set to Mirroring and Striping Block is set to Optimal.

Using the Define a New Array Screen

If necessary, press the tab key to move from field to field until the appropriate field is highlighted.

- **Selecting the RAID Mode**

  By default, this is set to Mirroring. To change to a different RAID mode, press the down arrow key until the mode that you want appears in the RAID Mode box—either Mirroring, Striping, Spanning, Stripe Mirroring or RAID 5.

  Note: Not all RAID levels are supported on all platforms. And enough Hard disks are required to complete the RAID configuration.

- **Selecting the Strping Block Size**

  Striping block size is given in kilobytes, and affects how data is arranged on the disk. It is recommended to leave this value at the default Optimal, which is 64KB, but the values can be between 4 KB and 128 KB (4, 8, 16, 32, 64, and 128 KB)

Assigning the Disks

The disks that you enabled from the RAID Config BIOS setup page appear in the Free Disks block. These are the drives that are available for use as RAID array disks.

To designate a free disk to be used as a RAID array disk,

1 Tab to the Free Disks section.
  The first disk in the list is selected

2 Move it from the Free Disks block to the Array Disks block by pressing the right-arrow key (—>).
  The first disk in the list is moved, and the next disk in the list is selected and ready to be moved.

3 Continue pressing the right-arrow key (—>) until all the disks that you want to use as RAID array disks appear in the Array Disks block.

Figure 1.8 illustrates the Define a New Array screen after one disk have been assigned as RAID 0 array disk.

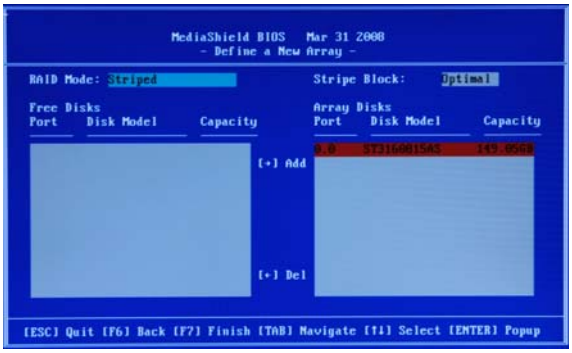

MediaShield BIOS Mar 31 2008
- Define a New Array -
RAID Mode: Striped
Stripe Block: Optimal
Free Disks
Port Disk Model Capacity
Array Disks
Port Disk Model Capacity
[+] Add
[+] Del
[ESC] Quit [F6] Back [F7] Finish [TAB] Navigate [↑↓] Select [ENTER] Popup

Figure 1.8 MediaShield BIOS—Array Disks Assigned

Completing the RAID BIOS Setup

1 After assigning your RAID array disk, press F7.

The Clear disk array prompt appears.

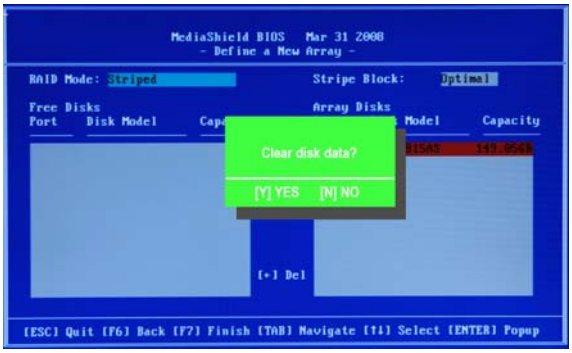


Figure 1.9 Clear Disk Data Prompt

2 Press Y to clear the disk data.

The Array List screen appears, where you can review the RAID arrays that you have set up.

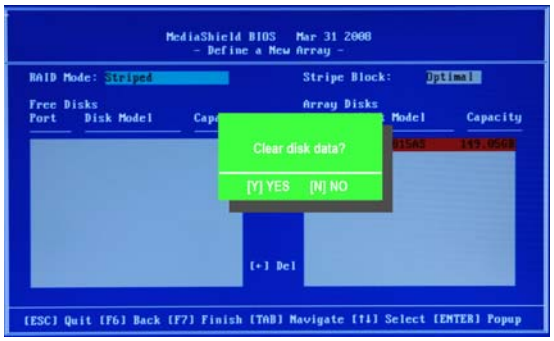

MediaShield BIOS Mar 31 2008
- Define a New Array -
RAID Mode: Striped
Stripe Block: Optimal
Free Disks
Port Disk Model Capa
Array Disks
Model Capacity
Clear disk data?
[Y] YES [N] NO
[+] Del
[ESC] Quit [F6] Back [F7] Finish [TAB] Navigate [↑↓] Select [ENTER] Popup

Figure 1.10 Array List Window

3 Use the arrow keys to select the array that you want to set up, then press B to specify the array as bootable.

4 Press Enter to view and verify details.

The Array Detail screen shows various information about the array that you selected, such as Striping Block used, RAID Mode, Striping Width, Disk Model Name, and disk capacity.

5 If you want to mark this disk as empty and wipe out all its contents, press C.

6 At the prompt, press Y to wipe out all the data, otherwise press N.

7 Press Enter again to go back to the previous screen and then press F10 to exit the RAID setup.

Installing the RAID Drivers

Your system may come with a Windows install disk that already includes NVIDIA RAID drivers. If so, then this section is not relevant.

If that is not the case (or you are trying to install a new version of Windows), then you will need an NVIDIA RAID driver F6 install floppy. Check to see if one came with your system. If not, you can create one by downloading the appropriate driver package and following the steps in this section.

1 Copy all files in "…\IDE\WinXP\sataraid" to a disk storage.

2 After you complete the RAID BIOS setup, boot from the Windows disk.
The Windows Setup program starts.

3 Press F6 and wait a few moments for the Windows Setup screen to appear.

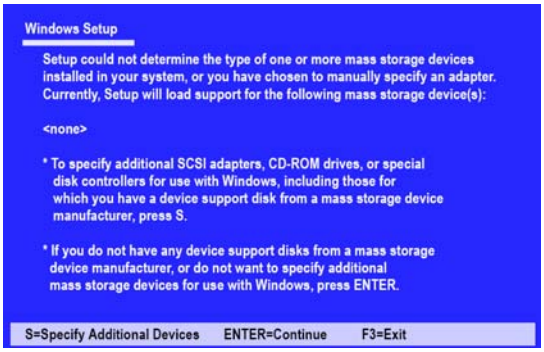

Windows Setup
Setup could not determine the type of one or more mass storage devices installed in your system, or you have chosen to manually specify an adapter. Currently, Setup will load support for the following mass storage device(s):
<none>
* To specify additional SCSI adapters, CD-ROM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufacturer, press S.
* If you do not have any device support disks from a mass storage device manufacturer, or do not want to specify additional mass storage devices for use with Windows, press ENTER.
S=Specify Additional Devices ENTER=Continue F3=Exit

Figure 1.11 Windows Setup—Specify Devices

4 Specify the NVIDIA drivers.

a Insert the floppy that has the RAID driver, press S, then press Enter.

The following Windows Setup screen appears:

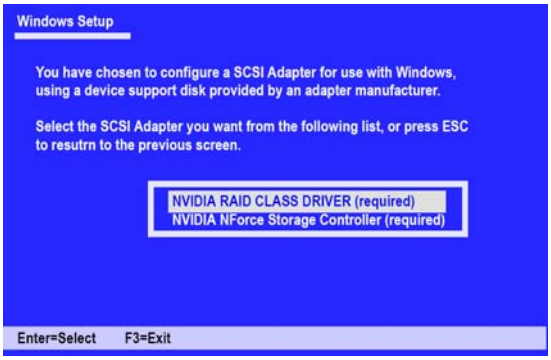

Windows Setup
You have chosen to configure a SCSI Adapter for use with Windows, using a device support disk provided by an adapter manufacturer.
Select the SCSI Adapter you want from the following list, or press ESC to resutrn to the previous screen.
NVIDIA RAID CLASS DRIVER (required)
NVIDIA NForce Storage Controller (required)
Enter=Select F3=Exit

Figure 1.12 Windows Setup—Selected SCSI Adapter

b Select "NVIDIA RAID CLASS DRIVER (required)" and then press Enter.

c Press S again at the Specify Devices screen, then press Enter.

d Select "NVIDIA NForce Storage Controller (required)" and then press Enter.

The following Windows Setup screen appears listing both drivers:.

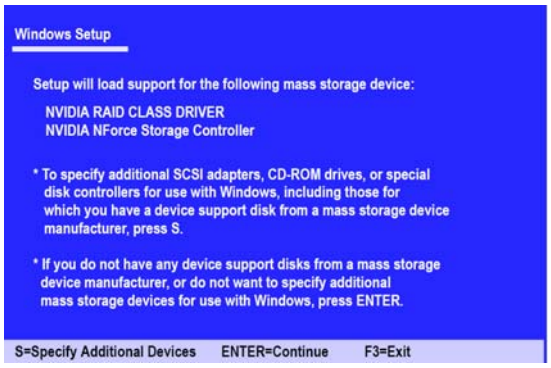

Windows Setup
Setup will load support for the following mass storage device:
NVIDIA RAID CLASS DRIVER
NVIDIA NForce Storage Controller
* To specify additional SCSI adapters, CD-ROM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufacturer, press S.
* If you do not have any device support disks from a mass storage device manufacturer, or do not want to specify additional mass storage devices for use with Windows, press ENTER.
S=Specify Additional Devices ENTER=Continue F3=Exit

Figure 1.13 Windows Setup—NVIDIA drives listed

5 Press Enter to continue with Windows Installation.

Be sure to leave the disk storage inserted in the disk drive until the blue screen portion of Windows installation is completed, then take out the floppy.

6 Follow the instructions on how to install Windows.

After Windows is completely installed, it is recommended that you install the ForceWare software in order to access the MediaShield RAID Management tool.

Note: Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.

This concludes chapter 5.

Chapter 6 Trouble Shooting Tips

Start up problems during assembly

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips.

a) System does not power up and the fans are not running.

1.Disassemble the PC to remove the VGA adaptor card, DDR memory, LAN, USB and other peripherals including keyboard and mouse. Leave only the motherboard, CPU with CPU cooler and power supply connected. Turn on again to see if the CPU and power supply fans are running.

2. Make sure to remove any unused screws or other metal objects such as screwdrivers from the inside PC case. This is to prevent damage from short circuit.

3. Check the CPU FAN connector is connected to the motherboard.

4. For Intel platforms check the pins on the CPU socket for damage or bent. A bent pin may cause failure to boot and sometimes permanent damage from short circuit.

5. Check the 12V power connector is connected to the motherboard.

6. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

b) Power is on, fans are running but there is no display

1. Make sure the monitor is turned on and the monitor cable is properly connected to the PC.
2. Check the VGA adapter card (if applicable) is inserted properly.
3. Listen for beep sounds. If you are using internal PC speaker make sure it is connected.
   a. continuous 3 short beeps : memory not detected
   b. 1 long beep and 8 short beeps : VGA not detected

c) The PC suddenly shuts down while booting up.

1. The CPU may experience overheating so it will shutdown to protect itself. Ensure the CPU fan is working properly.
2. From the BIOS setting, try to disable the Smartfan function to let the fan run at default speed. Doing a Load Optimised Default will also disable the Smartfan.

Start up problems after prolong use

After a prolong period of use your PC may experience start up problems again. This may be caused by breakdown of devices connected to the motherboard such as HDD, CPU fan, etc. The following tips may help to revive the PC or identify the cause of failure.

1. Clear the CMOS values using the CLR_CMOS jumper. Refer to CLR_CMOS jumper in Chapter 2 for Checking Jumper Settings in this user manual. When completed, follow up with a Load Optimised Default in the BIOS setup.

2. Check the CPU cooler fan for dust. Long term accumulation of dust will reduce its effectiveness to cool the processor. Clean the cooler or replace a new one if necessary.

3. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

4. Remove the hard drive, optical drive or DDR memory to determine which of these component may be at fault.

Maintenance and care tips

Your computer, like any electrical appliance, requires proper care and maintenance. Here are some basic PC care tips to help prolong the life of the motherboard and keep it running as best as it can.

1. Keep your computer in a well ventilated area. Leave some space between the PC and the wall for sufficient airflow.
2. Keep your computer in a cool dry place. Avoid dusty areas, direct sunlight and areas of high moisture content.

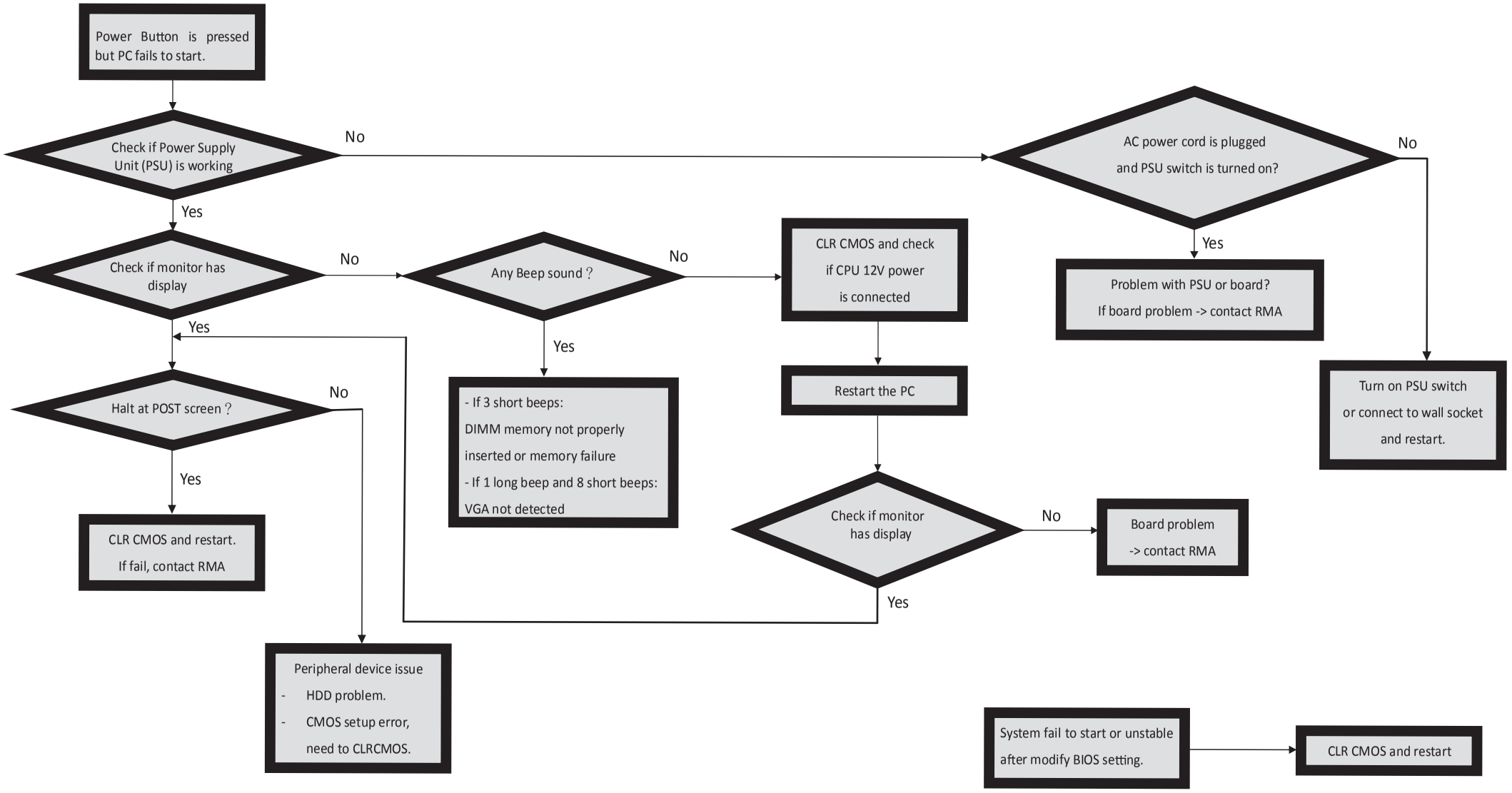
3. Routinely clean the CPU cooler fan to remove dust and hair.

4. In places of hot and humid weather you should turn on your computer once every other week to circulate the air and prevent damage from humidity.

5. Add more memory to your computer if possible. This not only speeds up the system but also reduces the loading of your hard drive to prolong its life span.

6. If possible, ensure the power cord has an earth ground pin directly from the wall outlet. This will reduce voltage fluctuation that may damage sensitive devices.

Basic Troubleshooting Flowchart


Power Button is pressed but PC fails to start.
Check if Power Supply Unit (PSU) is working
No
AC power cord is plugged and PSU switch is turned on?
No
Yes
Problem with PSU or board? If board problem -> contact RMA
Turn on PSU switch or connect to wall socket and restart.
Yes
Check if monitor has display
No
Any Beep sound ?
No
CLR CMOS and check if CPU 12V power is connected
Yes
- If 3 short beeps: DIMM memory not properly inserted or memory failure
- If 1 long beep and 8 short beeps: VGA not detected
Yes
Restart the PC
Halt at POST screen ?
No
Yes
CLR CMOS and restart. If fail, contact RMA
Check if monitor has display
No
Board problem -> contact RMA
Yes
Peripheral device issue
- HDD problem.
- CMOS setup error, need to CLRCMOS.
System fail to start or unstable after modify BIOS setting.
CLR CMOS and restart